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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/599,005	06/22/2000	Masahiro Kaminaga	520.38691X00	8576

24956 7590 06/23/2006

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EXAMINER	
ZAND, KAMBIZ	

ART UNIT	PAPER NUMBER
2132	

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Supplemental

Notice of Allowability

Application No.	Applicant(s)	
09/599,005	KAMINAGA ET AL.	
Examiner	**Art Unit**	
Kambiz Zand	2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *IDS filed on 01/18/2006*.

2. ☒ The allowed claim(s) is/are *26-35 now, re-numbered as claims 1-10*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 01/18/2006
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *06/15/2006* .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

KAMBIZ ZAND
PRIMARY EXAMINER

Kambiz Zand
Examiner
Art Unit: 2132

SUPPLEMENTAL

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Carl Brundidge on 06/21/2006.

The application has been amended as follows:

Claim 26

(Currently amended) A semiconductor chip comprising:

an information processing device;

an information memory device;

an encryption device;

a decryption device; and

a data bus, wherein two value information corresponds to two different voltages in the semiconductor chip, wherein data is transferred from the information processing device to the information memory device through the data bus and stored in the information memory device after the data has been encrypted by the encryption device, and

wherein data read from the information memory device is input into the information processing device through the data bus after the data has been decrypted by the decryption device; wherein the sum of the amount of power consumed by a charging and discharging device and the amount of power as a current flowing through any signal line of the memory device is fixed by utilizing bits inversion of a digital signal representing the data and supplying the signal to an electrical charge and discharge device; wherein the signal line is electrically charged and discharged with the encrypted data different from an original data; and reducing the power consumption.

Claim 33

(Currently amended) A semiconductor chip comprising:

an information processing device;

an information memory device;

a first encryption device;

a second encryption device;

a first decryption device;

a second decryption device; and

a data bus, wherein two value information corresponds to two different voltages in the semiconductor chip, wherein data output from the information processing device is encrypted by the first encryption device and output to the data bus, wherein the data encrypted by the first encryption device is transferred to the first decryption device

through the data bus, decrypted by the first decryption device and stored in the memory device, wherein the data read from the information memory device is encrypted by the second encryption device and output to the data bus, and wherein the data encrypted by the second encryption device is transferred to the second decryption device through the data bus, decrypted by the second decryption device and input to the information processing device; wherein the sum of the amount of power consumed by a charging and discharging device and the amount of power as a current flowing through any signal line of the memory device is fixed by utilizing bits inversion of a digital signal representing the data and supplying the signal to an electrical charge and discharge device; wherein the signal line is electrically charged and discharged with the encrypted data different from an original data; and reducing the power consumption.

2. The text of those sections of Title 35,U.S.Code not included in this section can be found in the prior office action.

3. The prior office actions are incorporated herein by reference. In particular, the observations with respect to claim language, and response to previously presented arguments.

4. Claims 1-25 have been cancelled.

5. Claims 26-35 now, re-numbered as claims 1-10 are pending.

Information Disclosure Statement PTO-1449

6. The Information Disclosure Statement submitted by applicant on 01/18/2006 has been considered. Please see attached PTO-1449.

Simens Wo 98/16883 A disclose a data processing apparatus, a first and second information processing device connected to one other by a signal line, an encryption device, a decryption device where the information between devices can encrypted and decrypted and where activation or deactivation of the encryption or decryption process is controlled.

EP0720098 B1 disclose security of microprocessor information systems having a cryptographic module which encodes outgoing addresses and data and decodes incoming data using inverse algorithm to that used in the development chain.

Kittirutsunetron (5,081,675) disclose system for protection of software in memory against unauthorized use where a programmable address scrambling device is interposed between the address port of the data storing device and a system address bus.

Allowable Subject Matter

7. **Claims 26-35 are allowed.**

wo 98/16888, EP0720098 and 5,081,675 singly or in combination with one another or other prior art do not disclose the specific inventive steps of Applicant's invention wherein two value information corresponds to two different voltages in the semiconductor chip and wherein the sum of the amount of power consumed by a charging and discharging device and the amount of power as a current flowing through any signal line of the memory device is fixed by utilizing bits inversion of a digital signal representing the data and supplying the signal to an electrical charge and discharge device; wherein the signal line is electrically charged and discharged with the encrypted data different from an original data; and reducing the power consumption as recited in the independent claims 26 and 33, and in light of the relationship between other limitation in the claims and further in light of the specification resulting in a masking process.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kambiz Zand whose telephone number is (571) 272-3811. The examiner can normally reached on Monday-Thursday (8:00-5:00). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571) 272-3799. The fax phone numbers for the organization where this application or proceeding is assigned as (571) 272-8300. Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KAMBIZ ZAND
PRIMARY EXAMINER

06/21/2006

AU 2132